

1	HAVING POLARITY SAFETY FEATURE	34	.Housing member, seal, spacer or
2	HAVING LIVING MATTER, E.G.,		fluid distributing or
	MICROORGANISM, ETC.		directing means
3	HAVING PULSE FEATURE	35	..Having sealing feature
4	WITH SONIC OR ULTRASONIC FEATURE	36	...Having bonded seal, e.g.,
5	RADIO ACTIVE MATERIAL CONTAINING		welded, adhesive, molded in
6	WITH PRESSURE EQUALIZING MEANS		situ, etc.
	FOR LIQUID IMMERSION OPERATION	37	....Having clamping means
7	WITH NONBATTERY ELECTRICAL	38	...Having support or spacers with
	COMPONENT ELECTRICALLY		fluid distribution means
	CONNECTED WITHIN CELL CASING	39	....And fluid directing means
	OTHER THAN TESTING OR	40	.Catalytic electrode structure or
	INDICATING COMPONENTS		composition
8	HAVING DISPARATE NONELECTRICAL	41	..Having electrolyte matrix or
	FUNCTION		barrier layer
9	HAVING DIVERSE CELLS OR DIVERSE	42	..Having organic constituent as
	REMOVABLE CELLS IN A SUPPORT		part of the electrode
	MEANS	43	...Organic catalyst
10	HAVING MAGNETIC FIELD FEATURE	44	..Having an inorganic matrix,
11	CURRENT PRODUCTION DEPENDENT UPON		substrate or support
	TEMPERATURE DIFFERENTIAL	45	...Of sintered particles
	BETWEEN A PAIR OF ELECTRODES	46	.Chemically specified electrolyte
12	FUEL CELL, SUBCOMBINATION THEREOF	47	HAVING EARTH FEATURE
	OR METHODS OF OPERATING	48	PRESERVING CELL IN STORAGE
13	.Process of operating		FEATURE
14	..Circulating or feeding	49	REGENERATING, SALVAGE OR REPAIR
	electrolyte		FEATURE OTHER THAN ONLY
15	...Active material in electrolyte		ADDITION OF ELECTROLYTE TO
16	..Fused or molten electrolyte		CELL OR ELECTRICALLY CHARGING
17	..Generating, regenerating or		PER SE
	recycling reactant	50	PROCESS OF CELL OPERATION
18	.Plural cells having means to	51	.Electrolyte circulation
	reduce ionic short circuit	52	.Activation of inactive cell
19	.Having means for active material	53	MEANS EXTERNALLY RELEASING
	generation or regeneration		INTERNAL GAS PRESSURE FROM
20	..By heating or cooling		CLOSED CELL, I.E., VALVE ETC.
21	..By electrical current	54	.Elastic, resilient or spring
22	.Automatic control means		biasing valve means
23	..Electrical output dependent	55	..Elastic band or O-ring valve
24	..Temperature dependent		member
25	..Pressure dependent	56	.Blowout type
26	.Having heat exchange means	57	SEALED CELL HAVING GAS PREVENTION
27	.Active material electrode-type		OR ELIMINATION MEANS
	cell or subcombination thereof	58	.Prevention means controlling an
28	..Envelope cathode-type or		auxiliary device
	subcombination thereof	59	.Prevention or elimination means
29	..And chemically specified		is one of the cell electrodes
	electrolyte material		or is electrically connected
30	.Solid electrolyte		to an electrode
31	..Tubular	60	..Electrodes having different
32	..Plural disc or modules		total capacity or one
33	..Electrolyte composition		electrode with charge or
	chemically specified		discharge reserve

61	WITH CONTROL MEANS RESPONSIVE TO BATTERY CONDITION SENSING MEANS	86	..Reactive, absorbable or diffusive type
62	.Temperature control	87	..Gang type
63	.Electrolyte feeding control from reserve supply	88	...Having manifold
64	..Having valve in control	89	..Other stopper, cap or plug type
65	TERMINAL PROTECTOR OTHER THAN SEAL THROUGH CASING	90	WITH MEASURING, TESTING, OR INDICATING MEANS
66	HAVING MEANS TO ACCOMMODATE ELECTRODE EXPANSION	91	.For charge or liquid level
67	HAVING MOVABLE MECHANICAL MEANS TO PROVIDE RELATIVE MOTION BETWEEN ELECTRODE AND ELECTROLYTE	92	..Having electrical circuitry
68	.Means moves electrode	93	...External type
69	..Rotary motion	94	PLURAL CONCENTRIC OR SINGLE COILED ELECTRODE
70	.Means moves electrolyte externally of electrode chamber	95	HAVING MEANS FOR DRAINING OR REMOVING ELECTROLYTE FROM A CELL OTHER THAN FILLER OPENING
71	WITH SYSTEM HAVING MEANS TO MOVE VENTILATING FLUID	96	CELL SUPPORT FOR REMOVABLE CELL
72	HAVING SPECIFIED VENTING, FEEDING OR CIRCULATION STRUCTURE (OTHER THAN FEEDING OR FILLING FOR ACTIVATING DEFERRED ACTION-TYPE BATTERY)	97	.Having switch or interlock means
73	.Single filling opening and means to equalize fluid level in plural cells	98	.Having disparate support structure, e.g., eyeglass temple, etc.
74	.Having means to control electrolyte level when liquid is added, other than a visual reference point	99	.For plural cells
75	..For different levels	100	.Support or holder per se
76	..Float valve	101	FLUID ACTIVE MATERIAL OR TWO-FLUID ELECTROLYTE COMBINATION HAVING AREAS OF NONMIXTURE
77	..By establishing an air lock	102	.Active material in molten state
78	...Liquid seal only	103	..With fused electrolyte, i.e., molten
79	...Movable valve structure supported within the filler opening	104	..With solid-state electrolyte
80	.Having (manual) electrolyte storage feeding a device	105	.Active material in solution
81	.Having nonmovable means providing motion between electrolyte and electrodes, i.e., circulation	106	..Copper sulfate solution
82	.Venting structure	107	..Iron containing material
83	..Separate ventilating inlet and exhaust openings	108	..Nitrogen containing material
84	..Nonspill fluent electrolyte type other than gas diffusive type	109	..Chromium containing material
85	...Weight actuated valve type	110	DEFERRED ACTION TYPE
		111	.Responsive to light
		112	.Responsive to heat
		113	.Responsive to movement of electrode on contained electrolyte
		114	..Activated by spin or set back
		115	..Activated by explosive charge
		116	..Frangible separation means
		117	..By orientation of the cell
		118	.Responsive to addition of liquid
		119	..Activated by immersion, e.g., sea water type
		120	WITH HEAT EXCHANGE FEATURE

121	ADJUNCTS IN COMBINATION WITH OR FOR CONNECTION TO AN EXTERNAL ELECTRICAL ELECTRIC CURRENT CARRYING MEMBER OF A BATTERY OTHER THAN TERMINAL PROTECTORS, E.G., TERMINAL ADAPTER, CAPS, LIFTERS, ETC. AND CONNECTORS PER SE	143	...Ribs or projections attached to sheet material
122	CURRENT PRODUCING CELL, ELEMENTS, SUBCOMBINATIONS AND COMPOSITIONS FOR USE THEREWITH AND ADJUNCTS	144	...Plural layers
123	.Having means to interchangeably connect plural individual cells or means to connectively support cell to current seeking apparatus	145	....Having defined porosity either functional or by size (i.e., semipermeable, permselective, ionpermeable, microporous, etc.)
124	.Printed cell type	146	..Having electrode spacing projections
125	.Standard cell or counter emf type	147	...Projections are deformed portions, of a sheet material, i.e., corrugations, etc.
126	.Cell with protective layer on electrolyte	148	.Plural housing having spacing means or channels for air circulation and short prevention
127	.Tape or flexible-type cell including tape fuel cells or subcombination thereof	149	.Plural cells
128	.Electrode or plural tablets, pellets or discs	150	..With integral switch means
129	.Separator, retainer or spacer insulating structure (other than a single porous flat sheet, or either an impregnated or coated sheet not having distinct layers)	151	..Casing having interlocking structure
130	..Insulator structure is only spacer of the rod, button, strip, or frame type	152	..Individual cells connected in repeating contiguous layered units
131	..Having electrode enclosing feature	153	...Having unit enclosing housing
132	...Separating material in bulk form about electrode	154	....Having sectional component
133	...Cylindrical unit cell type, flat unit cell type or porous cup type	155	.....Of tray, cup or dish shape in nested or telescopic relationship
134	....Paste or gel	156	..Complete cells
135	.....With layer of material or spacing means	157	...In end-to-end contact, e.g., stacked button-type cell, etc.
136	...Envelope type	158	...Having intercell connector
137	....Coating on electrode	159	....And common external casing, tray or clamp means
138	....Having support frame or cover	160	..Having intercell connector
139	....Having edge bond or seal	161	.Intracell assembly having cell electrode connector
140	...Tubular type	162	.Flat-type unit cell and specific unit cell components
141	....Having plural layers of diverse material	163	.Cell enclosure structure, e.g., housing, casing, container, cover, etc.
142	..Having plural distinct components	164	..Cylindrical unit cell type, e.g., cup container electrode, tubular electrode, casing, etc.
		165	...Having centrally located anode, i.e., "inside-out" type cell
		166	...Reactive metallic can, cup or tubular electrode
		167Having outer nonreactive housing, casing, or jacket

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|-----|---|-----|--|
| 168 |Having metallic or
conductive outer casing | 310 |Hetero ring containing
polymer |
| 169 |Outer casing electrically
connected to reactive
electrode | 311 |Oxygen is a ring member of
the hetero ring |
| 170 |Electrical contact terminal
plate or cap clamped to or
embedded in a portion of the
housing | 312 |The hetero ring is three
membered |
| 171 |Having seal | 313 |Silicon containing polymer |
| 172 |Mechanical clamping pressure
seal | 314 |Sulfur, nitrogen, or
phosphorus containing polymer |
| 173 |And sealing mass or
compound | 315 |Nitrogen and phosphorus in
the polymer |
| 174 | ...Having seal material | 316 |Halogen containing polymer |
| 175 | ..Cover only | 317 |Oxygen containing polymer |
| 176 | ..Container only | 318 | ...Silver containing component |
| 177 | ..Housing or casing with plural
covers | 319 | ...Aluminum containing component
(e.g., LiAlCl ₄ , etc.) |
| 178 | ..Having terminal | 320 |The component is alumina
(i.e., aluminum oxide) |
| 179 | ...On or through a side of
housing | 321 | ...Alkali metal containing
component |
| 180 | ...Sealing sleeve embedded or
molded in cover | 322 |The alkali metal is lithium |
| 181 | ...And terminal seal | 323 |Lithium and halogen
containing compound |
| 182 |Means to stop rotational
movement between cover and
terminal | 324 | ..Chemically specified organic
solvent containing |
| 183 |Having threaded compression
means | 325 | ...And chemically specified
inorganic solvent |
| 184 |Sealing mass or compound | 326 | ...Plural organic solvents (i.e.,
solvent mixture) |
| 185 | ..Having seal feature | 327 |One of the organic solvents
contains a hetero ring |
| 186 | ..Having cell assembly support
feature | 328 |Nitrogen is ring member of
the hetero ring |
| 187 | ..Having handle or lifting device | 329 |Oxygen is ring member of the
hetero ring |
| 188 | ..Include electrolyte chemically
specified and method | 330 |The hetero ring is a cyclic
carbonate |
| 189 | ..Precursor composition | 331 |Plural cyclic carbonate
solvents |
| 300 | ..The electrolyte is gelled | 332 |And acyclic carbonate or
acyclic carboxylic acid ester
solvent |
| 301 | ...Carbohydrate or derivative
containing (e.g., starch,
cellulose, etc.) | 333 |And acyclic ether solvent |
| 302 | ...Silicon containing | 334 |And acyclic oxygen or
nitrogen containing solvent
compound |
| 303 | ...Organic polymer containing | 335 |The acyclic oxygen
containing solvent compound is
an acyclic ether |
| 304 | ..The electrolyte is solid | 336 | ...Hetero ring in the organic
solvent |
| 305 | ...Temperature range of
electrolyte operation or
electrolyte processing is
specified | 337 |Oxygen is the only ring
hetero atom in the hetero ring
(e.g., dioxolane, gamma
butyrolactone, etc.) |
| 306 | ...Organic component containing | | |
| 307 |Chemically specified organic
solute | | |
| 308 |Carbohydrate or derivative | | |
| 309 |Two or more polymers (i.e.,
polymer mixture) | | |

338	.....The hetero ring is a cyclic carbonate (e.g., ethylene carbonate, propylene carbonate, etc.)	218.2	...Hydrogen storage material is active material
339	...Nitrogen containing organic solvent compound (e.g., acetonitrile, etc.)	219	...Silver component is active material
340	...Sulfur containing organic solvent compound	220	...Copper component is active material
341	...Oxygen containing organic solvent compound	221	...Iron component is active material
342	....Acyclic carbonate solvent	222	...Cadmium component is active material
343	....Acyclic carboxylic acid ester solvent	223	...Nickel component is active material
344	..Chemically specified inorganic solvent other than water	224	...Manganese component is active material
345	...Sulfur or phosphorus in the inorganic solvent	225	...Lead component is active material
346	....Sulfur dioxide containing inorganic solvent	226	....Alloy
347	..Organic solute component in aqueous electrolyte	227	....Metal sulphate or carbonate
199	..Halogen containing	228	....Lead oxide
200	...Hydrogen containing	229	...Zinc component
201	....Ammonium	230	....With mercury
202	..Chromium containing	231	....Zinc oxide
203	..With acid containing N or P constituent	231.1	...Alkalated transition metal chalcogenide component is active material
204	..Sulphuric acid	231.2	....Alkalated vanadium (V) chalcogenide
205	...Sulphate containing	231.3	....Alkalated cobalt (Co) chalcogenide
206	..Alkaline	231.4	...Alkalated carbon, graphite, or carbonaceous component is active material
207	...With salt or acid component	231.5	...Vanadium (V), chromium (Cr), niobium (Nb), molybdenum (Mo), titanium (Ti), or tungsten (W) component is active material
208	..Electrode support for suspending or holding an electrode in a battery	231.6	...Alkaline earth metal or magnesium (Mg) component is active material
209	..Electrode	231.7	...Halogenated carbon, graphite, or carbonaceous component is active material
210	..Bipolar type	231.8	...Carbon, graphite, or carbonaceous component is active material
211	..Having connector tab	231.9	...Alkali metal component is active material
212	..Having active material with organic component	231.95	....The alkali metal is lithium
213	...Organic component is active material	232	..Having inorganic binder or conductive filler
214	...Organic component is an antioxidant	233	..Grid or holder for active material
215	...Organic component is an expander or addition agent for improving electrode capacity or plating characteristics	234	...Grid or holder has nonconducting component portion thereof
216	....Dendrite or "tree" forming inhibitor		
217	...Organic component is a binder		
218.1	..Chemically specified inorganic electrochemically active material containing		

235	...Having particulate or fibrous porous mass including a sintered mass	Any foreign patents or non-patent literature from subclasses that have been reclassified have been transferred directly to FOR Collections listed below. These Collections contain ONLY foreign patents or non-patent literature. The parenthetical references in the Collection titles refer to the abolished subclasses from which these Collections were derived.
236	....Having coating in the pores	
237	....Having support or reinforcing member	
238	...Having longitudinal electrically conducting tubes or cores	
239	...Having conductive receptacle or mechanical locking means for the active material	
240	....Locking means being bendable tabs	CURRENT PRODUCING CELL, ELEMENTS, SUBCOMBINATIONS AND COMPOSITIONS FOR USE THEREWITH AND ADJUNCTS .Include electrolyte chemically specified and method
241	...Open mesh or perforated plate	
242	....Expanded metal	FOR 100 ..Gelled (429/190)
243	....Having members in a face plane of the grid being offset from members in the plane of the opposite face	FOR 101 ..Solid (429/191)
244	.....Distinct elements or members intermediate the face members	FOR 102 ...Organic (429/192)
245	...Materials chemically specified	FOR 103 ...Metal oxide component (429/193)
246	..With insulating separator, spacer or retainer means	FOR 104 ..Nonaqueous solvent (429/194)
247	.Separator, retainer, spacer or materials for use therewith	FOR 105 ...With water (429/195)
248	..Having additive for effecting the charge capacity, life, etc., of a cell	FOR 106 ...Inorganic solvent (429/196)
249	..Organic material	FOR 107 ...Plural nonaqueous system (429/197)
250	...And wetting agent or surface acting agent	FOR 108 ..Having organic solute component (429/198)
251	...And inorganic material	..Electrode
252	....Silicon containing	FOR 109 ..Having inorganic active material chemically specified (429/218)
253	...Phenolic or thermosetting resin	
254	...Rubber or thermoplastic resin	
255	...Natural or treated plant materials	

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